Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-6-12

Name: KELBAUGH RD BRIDGE

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended _____ Eligibility Not Recommended X

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

Reviewer, OPS: Anne E. Bruder Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze Date: 3 April 2001

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. F 6-12

SHA Bridge No. F15-09 **Bridge name** Kelbaugh Road over Owens Creek

LOCATION:
Street/Road name and number [facility carried] Kelbaugh Road

City/town Thurmont **Vicinity** X

County Frederick

This bridge projects over: Road____ **Railway**_____ **Water** X **Land** ____

Ownership: State __ **County** X **Municipal** ____ **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
National Register-listed district ____ **National Register-determined-eligible district** __
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ___ **Trestle** ____ **Timber-And-Concrete** ___

Stone Arch Bridge _____

Metal Truss Bridge X

Movable Bridge ____:
Swing _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
Vertical Lift _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete ___ :
Concrete Arch_____ **Concrete Slab** __ **Concrete Beam** ____ **Rigid Frame** _____
Other _____ **Type Name** _____

DESCRIPTION:

Setting: Urban _____ **Small town** _____ **Rural** X

Describe Setting:

Bridge F15-09 carries Kelbaugh Road over Owens Creek in the vicinity of Thurmont, Frederick County. Kelbaugh Road runs generally in an east-west direction in the area while Owens Creek flows north-south. The bridge is situated in an early twentieth century residential development and there is one residence near the bridge.

Describe Superstructure and Substructure:

Bridge F15-09, constructed circa 1905, is a single-span, Warren pony truss measuring 12.6 meters (41.5 feet) in total length. It has three panels with diagonal endposts. The top and bottom chords are built-up sections of steel channels connected by rivets. The floor system has two steel stringers and steel floorbeams. All verticals and diagonals are paired steel angles with cross bars. The verticals have been reinforced with threaded rods. All original connections are riveted. The width of the roadway is 3.1 meters (10.17 feet) and the distance between the centerline of the trusses is 3.7 meters (12.17 feet). There is no sidewalk on the bridge and the truss members are protected by a single steel angle. The bridge, which was built on a 70° skew, is posted for 2.7 tonnes (3 tons) and has a sufficiency rating of 20.7. The abutments are parged stone masonry with flared parged stone masonry wing walls.

Discuss Major Alterations:

According to the county engineer of Frederick County, the bridge was originally built with riveted connections. The bridge was repaired in 1995, and it received a new wood deck, new bottom chord angles, new interior gusset plates, new steel floor beams, and new steel stringers in the south bay. The inspection report from 1997 details that the bridge is in good condition, with peeling paint, some corrosion of truss members and an area of spalled concrete underneath the bearings. In addition, some lateral bracing on the bottom chord has been removed. The report recommends placing concrete on the north abutment, repairing the stone masonry on the south abutment, replacing the missing lateral bracing, and cleaning and repainting the steel.

HISTORY:

WHEN was the bridge built circa 1905
This date is: Actual _____ **Estimated** X
Source of date: Plaque _____ **Design plans** ____ **County bridge files/inspection form** X
Other (specify): The date is based on the similarities between this bridge and other bridges in Frederick County built by the York Bridge Company of York, Pennsylvania circa 1905.

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to ensure its structural integrity.

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge was previously surveyed by the Frederick County Office of Historic Preservation in 1978; however, a determination of eligibility was not made by the Maryland Historical Trust. The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

This bridge was one of a large number of metal truss bridges built in Maryland in the late nineteenth and early twentieth centuries. Metal trusses built in the late nineteenth century were frequently of wrought iron construction and featured pinned connections. By the turn of the century, steel was the material of choice and connections were sometimes pinned and sometimes rivetted. By 1920, the truss type exhibited more heavily configured members and rivetted connections.

General Truss Bridge Trends

The first metal truss bridges in the United States were built to carry rail and canal traffic. A rapidly expanding railroad network, with needs for long spans, heavy load capacity and rapid construction, served as the impetus for advances in metal truss technology from the mid-nineteenth century to its close. The earliest metal truss forms of the United States were patented and introduced between 1830 and the Civil War, including the popular Pratt (1844) and Warren (1848) types.

From the Civil War through the end of the century metal truss technology improved in response to increasing loads and speeds, and new transportation needs; steel began to replace iron; numerous "bridge works" and "iron works" were established in the eastern U.S. for fabricating and shipping the truss components to the bridge site; and expanding road networks required a low cost, expedient bridge type.

General Trends in Maryland

In Maryland, the earliest metal truss bridges carried rail lines, including the Baltimore & Ohio (B&O) and the Baltimore and Susquehanna Railroads. As early as 1849, B&O Chief Engineer Benjamin H. Latrobe recommended the construction of metal truss bridges for "large crossings"; in 1850 he reported "much satisfaction" with the future of iron bridges after constructing the metal truss bridge at Savage.

Numerous metal truss bridges were manufactured in Baltimore, the early industrial hub of bridge building activity in the state, from the 1850s through the 1880s. Among the early bridge builders in the 1850s and 1860s were former B&O employees, B.H. Latrobe and Wendell Bollman, founders of competing Baltimore bridge building companies. Historical research identified more than twenty-five bridge companies in the region that built truss bridges in Maryland between 1850 and 1920. Among these were the Wrought Iron Bridge Company, King Iron Bridge Company, Patapsco Bridge and Iron Works, Baltimore Bridge Company, Pittsburg Bridge Company, Penn Bridge Company, Smith Bridge Company, Groton Bridge and Manufacturing Company, Roanoke Iron and Bridge Company, York Bridge Company, Vincennes Bridge Company, Bethlehem Steel Company, American Bridge Company.

The location of the Baltimore & Ohio Railroad, Baltimore bridge fabricators, and the urban needs of the city and its environs resulted in the erection of numerous early truss bridges in Baltimore and the surrounding area. Initially constructed for the railroads, their use quickly came to replace the earlier timber bridges on Baltimore roads.

From Baltimore, the use of the metal truss spread to other parts of the state, with County Commissioners in the Piedmont and Appalachian Plateau counties erecting numerous metal trusses from the 1870s to the early twentieth century. Frederick County erected numerous truss spans during that time. Records indicate that in the early twentieth century the York Bridge Company built a number of metal trusses there, primarily Pratt but also Warren and Parker trusses. In the same county, King Iron Bridge Manufacturing Company erected several bowstring pony truss bridges.

The Kelbaugh Road Bridge is a Warren Truss. Patented in 1846 by British engineers James Warren and Willoughby Monzoni, the Warren truss and its variants constitute a commonly built metal truss bridge type of the nineteenth and early twentieth centuries. The original form of the Warren was purely a series of equilateral triangles in which the diagonals carried both compressive and tensile loads. Later, verticals were added but served only as bracing for the entire triangular web system between parallel top and bottom chords. Like the Pratt truss, the Warren truss was widely built throughout the United States from the middle of the nineteenth century well into the twentieth century, and spawned many variants, including a double intersection, or lattice, subtype in which two triangular truss systems are superimposed with or without verticals.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge has been altered and is lacking such character-defining features as truss members including bottom chord angles and interior gusset plates, steel floor beams, and some steel stringers.

Does the bridge retain integrity of important elements described in Context Addendum?

This bridge was repaired in 1995, resulting in the loss of such character-defining elements as the truss members (bottom chord angles and interior gusset plates), steel floor beams, and some steel stringers.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

It is not known if the bridge is a significant example of the work of a manufacturer, designer, and/or engineer. The bridge has no plaques indicating construction date or manufacturer; however, the bridge is similar to those built by the York Bridge Company in Frederick County in the early part of the twentieth century.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files X **SHA inspection/bridge files** ___
Other (list):

Frederick County Office of Historic Preservation, *Maryland Historical Trust Inventory Form for State Historic Sites Survey #F 6-12.* 1978.

P.A.C. Spero & Company and Louis Berger & Associates, *Historic Highway Bridges in Maryland: Historic Context Report.* Prepared for the Maryland State Highway Administration.

SURVEYOR:

Date bridge recorded July 1997

Name of surveyor Caroline Hall/Ryan McKay
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Suite 412, Baltimore, Maryland 21204
Phone number 410-296-1635 **FAX number** 410-296-1670

Maryland Historic Highway Bridges

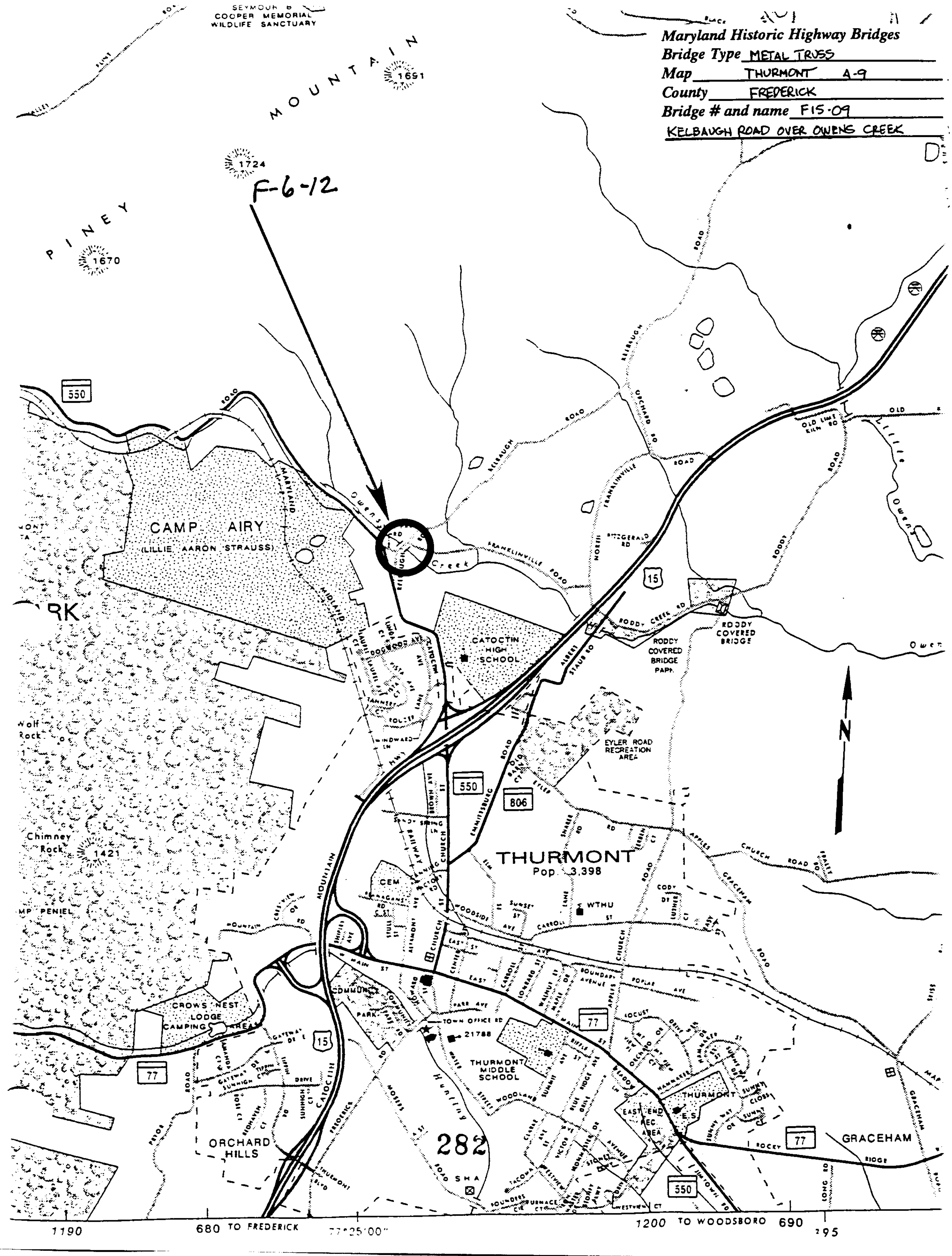
Bridge Type METAL TRUSS

Map THURMONT A-9

County FREDERICK

Bridge # and name F15-09

KELBAUGH ROAD OVER OWENS CREEK




RESTRICTED BRIDGE
SINGLE UNIT
6 000 LBS GVW
COMBINATION UNIT
6 000 LBS GCW


SINGLE UNIT
6,000 LBS GVW
COMBINATION UNIT
6,000 LBS GCW

F-6-12

Kelbaugh Road Bridge
Thurmont
Public

The Kelbaugh Road Bridge is a single span pony pratt steel truss bridge of Pratt design which spans Owens Creek near Thurmont. The single lane bridge is set on cement abutments. Joints of the bridge are secured with rivetted connections. The structure is approximately sixty feet in length and fifteen feet wide and was built in the first part of the twentieth century. No plaque is located on the bridge, so the construction date and company are unknown.

At one time there were over twenty companies manufacturing iron truss bridges represented in the Maryland and Virginia area. Usually once a community had determined the need for a bridge, the County Commissioners advertised for bids in the local newspaper. A particular bridge design or style was chosen from a book of designs by the manufacturing company and a bid was submitted.

Companies which provided bridges to Frederick County, Maryland in the nineteenth century include the Wrought Iron Bridge Company of Canton, Ohio, the King Iron Bridge and Manufacturing Company of Cleveland, Ohio, and the Groton Bridge Manufacturing Company of Groton, New York. Most of the bridges constructed in the twentieth century in this county were manufactured by the York Bridge Company of York, Pennsylvania.

MARYLAND HISTORICAL TRUST

F-6-12
1101203717

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC: Kelbaugh Road Bridge

AND/OR COMMON:

2 LOCATION

STREET & NUMBER: Kelbaugh Road over Owens Creek

CITY, TOWN: Thurmont — VICINITY OF

CONGRESSIONAL DISTRICT: E. D. 15

STATE: Maryland

COUNTY: Frederick

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME: Frederick County Roads Department — Telephone #:

STREET & NUMBER: Montevue Lane

CITY, TOWN: Frederick — VICINITY OF

STATE, zip code: Maryland 21701

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.

Liber #:

Folio #:

STREET & NUMBER:

CITY, TOWN — STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE:

DATE:

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS:

CITY, TOWN — STATE

F-6-12

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	_DETERIORATED	_UNALTERED	X ORIGINAL SITE
_GOOD	_RUINS	_ALTERED	_MOVED DATE_____
X FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Kelbaugh Road Bridge is a single span pony pratt steel truss bridge of Pratt design which spans Owens Creek near Thurmont. The single lane bridge is set on cement abutments. Joints of the bridge are secured with rivetted connections. The structure is approximately sixty feet in length and fifteen feet wide and was built in the first part of the twentieth century. No plaque is located on the bridge, so the construction date and company are unknown.

CONTINUE ON SEPARATE SHEET IF NECESSARY

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE
__1500-1599	__AGRICULTURE	__ECONDMICS	__LITERATURE	__SCULPTURE
__1600-1699	__ARCHITECTURE	__EDUCATIDN	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER
__1800-1899	__COMMERCE	__EXPLORATIDN/SETTLEMENT	__PHILDSOPHY	X TRANSPORTATION
__1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

At one time there were over twenty companies manufacturing iron truss bridges represented in the Maryland and Virginia area. Usually once a community had determined the need for a bridge, the County Commissioners advertised for bids in the local newspaper. A particular bridge design or style was chosen from a book of designs by the manufacturing company and a bid was submitted.

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CONTINUE ON SEPARATE SHEET IF NECESSARY

F-6-12

9 MAJOR BIBLIOGRAPHICAL REFERENCES

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE COUNTY

STATE COUNTY

11 FORM PREPARED BY

NAME / TITLE

Cherilyn Widell, Sites Analyst — DATE: 9/27/78

ORGANIZATION

Frederick County Office of Historic Preservation — TELEPHONE: 694-1063

STREET & NUMBER

12 East Church St., Winchester Hall — STATE

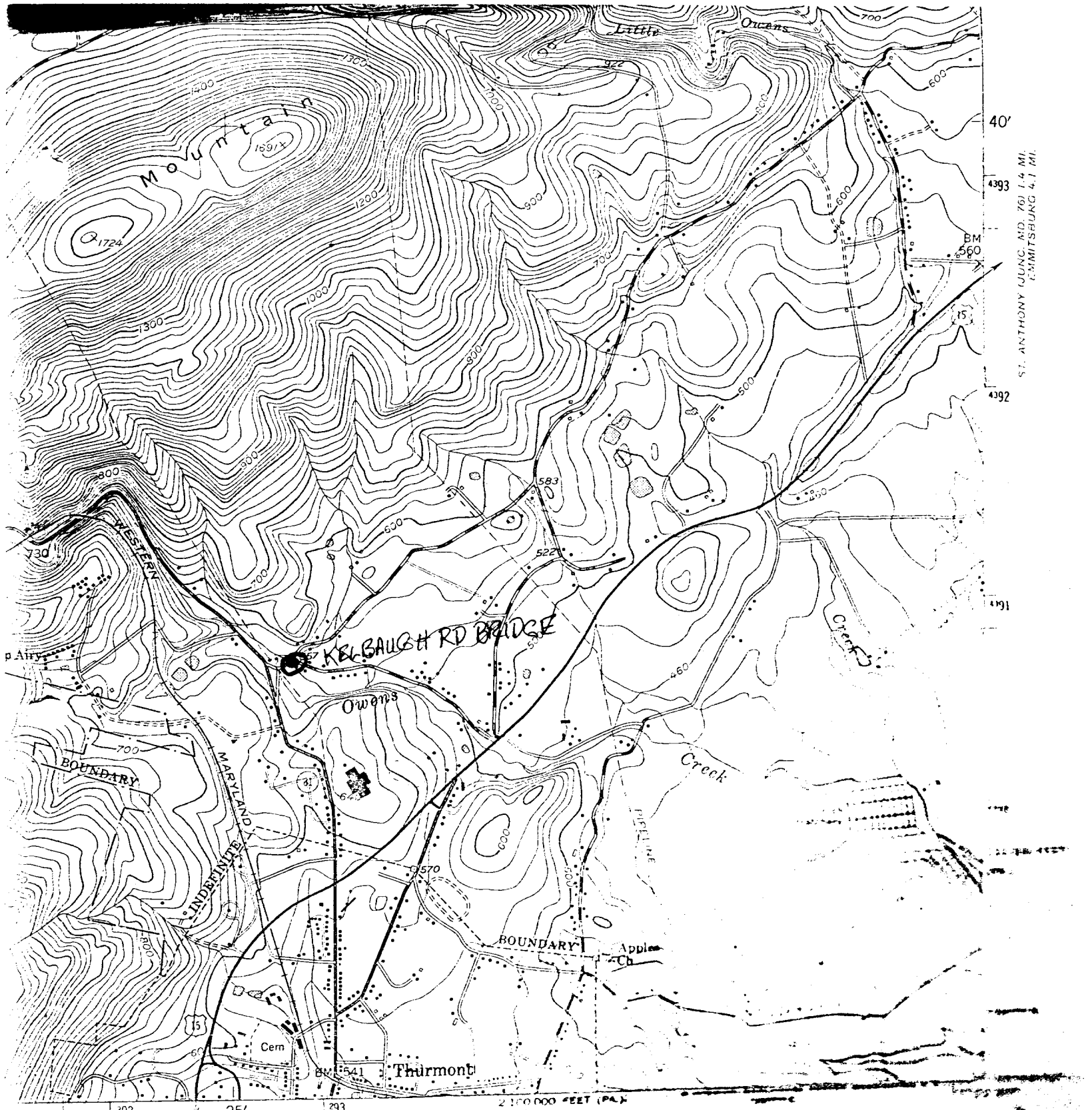
CITY OR TOWN

Frederick — Maryland 21701

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438



F612
BLUE RIDGE
SUMMIT
QUADRANGLE

ANDARDS
ON, D. C. 20242
AILABLE ON REQUEST


WEIGHT
LIMIT
10
TONS
SPEED
LIMIT
10

KELBAUGH RD BRIDGE
KELBAUGH RD OVER OWENS CREEK
NORTH APPROACH

F-6-12
CEW 10/77